



THE ADVISOR

A Publication of the Rocky Flats Citizens Advisory Board

Roadblock to Rocky Flats Closure: Plutonium Shipments

In February 2001, the U.S. General Accounting Office reported that the Rocky Flats Environmental Technology Site (RFETS) might not meet the accelerated 2006 closure deadline. Although the site contractor, Kaiser-Hill, has made significant progress to date, the most difficult challenges to cleanup remain. These include the demolition of

the plutonium process buildings and the complete removal of the remaining plutonium materials, including metal, oxide, and waste forms.

In order to close the site on time, the site contractor must adhere to a rigorous schedule. One of the scheduling difficulties lies with the removal of the remaining tons of non-pit plutonium

metals, oxides and wastes from the site (an exact figure has not been released). These materials will be stabilized and packaged using the Plutonium Stabilization and Packaging System (PuSPS) and stored in Building 371 until shipping is scheduled to begin at the end of this year. Building 371 is the primary nuclear material storage facility for RFETS and has limited capacity. The shipping schedule is dependent upon the readiness of the Savannah River Site in South Carolina to accept the plutonium. The Savannah River Site will treat and temporarily store the materials, for approximately 10 years, until a permanent disposal site is secured for them.

There are some recent developments that could impact Rocky Flats' ability to ship. First, the Bush administration's draft budget, released in April 2001, did not include funding for a plutonium immobilization process that is intended to encase some of the lower grade materials from Rocky Flats in glass. The administration

Plutonium Stabilization and Packaging System (PuSPS)

In order to achieve closure by 2006, and to comply with long-term plutonium storage standard DOE-STD-3013-99, *Stabilization, Packaging, and Storage of Plutonium-Bearing Materials*, RFETS must stabilize and repackage approximately 6,000 kilograms (kgs) of non-pit plutonium metal and 3,200 kgs of plutonium compounds. Once stabilized and repackaged, the plutonium metal and oxides will be shipped to the Savannah River Site in South Carolina for temporary storage (10 years), until an eventual disposal site is secured.

The Plutonium Stabilization and Packaging System (PuSPS) began operating in June 2001 after several lengthy delays. The system works by first opening the containers of plutonium metal, brushing off the plutonium oxide, and heating the oxide in a furnace. This heating process converts the oxide into a stable form, suitable for storage. The metal and oxides are then repackaged in specially designed welded containers. Shipments to the Savannah River Site are scheduled to begin in October 2001.

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Rocky Flats Updates

What's New With the Radionuclide Soil Action Level (RSAL) Review?

Action levels are the threshold contaminant concentration levels in the soil that trigger a cleanup action. In early August, the agencies released preliminary results from their reassessment of the RSALs, conducted as part of the Year 2000 RFCA Annual Review. The results covered a broad spectrum of contaminant levels, ranging from near background levels to levels greater than those calculated in 1996 (651 picocuries per gram of soil).

The release of the matrix of potential RSALs, accompanied by justifications for key values used in the modeling, comes in advance of the Parameter Evaluation Report (Task 3) of the RSAL review. Once the report is complete, it will be subject to peer review. In the interim, the community and the regulators will begin discussing the numbers and what they mean for the cleanup of Rocky Flats. Related issues that also need to be addressed include whether there should be different tiers of action levels and how to apply the ALARA ("as low as reasonably achievable") principle. Of the five tasks associated with the RSAL review, only Task 3 and Task 4, New Science, remain to be completed.

The final RSAL Review Report will present the joint agency recommendations on the RSALs. This report will be released sometime this fall and submitted for formal public comment, unless the agencies cannot agree on what RSAL should be chosen. If there is an impasse, it may have to be settled through RFCA dispute resolution.

Resource Center to Aid Sick Workers Opened

In late July, the Department of Energy and the Department of Labor opened a new resource center in Westminster, Colorado. This resource center provides a place where nuclear weapons workers, retirees, surviving spouses, and their eligible dependents can go for help with filing claims for compensation under the Energy Employees Occupational Illness Compensation Program Act of 2000. The resource center is sponsored jointly by DOE and the U.S. Department of Labor, and is one of ten centers located throughout the country.

Workers can call the office at (720) 540-4977 (or toll-free at 1-866-540-4977) to set up an appointment with a caseworker trained to help complete applications and obtain medical and employment information.

Community Radiation Monitoring Program for Rocky Flats

The Community Radiation Monitoring Program, known as ComRad, is a cooperative effort between the Department of Energy (DOE), the Rocky Flats Citizens Advisory Board, and the communities surrounding the Rocky Flats Environmental Technology Site. The ComRad program consists of a network of four meteorological and radiation monitoring stations located in Arvada, Broomfield, Northglenn, and Westminster, as well as a community outreach and education effort. For more information on the ComRad program,

visit www.comrad.org or contact MERCO, Inc. at 303.274.9686.



At left, Shirley Garcia, City of Broomfield representative to the ComRad Oversight Panel, discusses the filter exchange with MERCO's technician at one of the ComRad monitoring stations.



Workers or their families can also pick up application forms at the center located at 8758 Wolff Court, Suite 201, in Westminster.

The new law went into effect July 31. Under this law, the federal government can provide up to \$150,000 in lump sum compensation and related medical expenses to workers who become seriously ill from exposure to radiation, beryllium, or silica while working in nuclear weapons facilities.

Natural Resource Management Issues

Wetlands Restoration Project

The Colorado Natural Heritage Program has called the Rocky Flats Buffer Zone a "significant conservation site for the protection of the Nation's natural biodiversity." Unique plant communities such as the xeric tallgrass prairie are threatened by a host of exotic weeds. According to the 2001 Annual Vegetation Management Plan, the best hope for controlling the weed problem lies with setting reasonable priorities and then exercising a suite of options on those weeds that pose the greatest threat.

Today's site managers have an important tool at their disposal for prioritizing the relative risks posed by different weed species. The Alien Plants Ranking System is a computer software program that compares potential impacts of various non-native plant species and evaluates the feasibility of taking action against them.

Using this analytical tool, each weed at Rocky Flats was assigned an overall priority ranking. The results of the analysis confirmed what site managers already knew, diffuse knapweed constitutes the greatest threat to the native plant communities. This highly aggressive invader is termed a Priority 1 Species. Diffuse knapweed ranks highest on the impact scale, not only because of its high rate of seed production but also as a result of its ability to eventually displace native plants. At a certain point in its life cycle, the mature diffuse knapweed plant dries up, breaks off, and can become windblown like tumbleweed, contributing even further to its ability to disperse. Diffuse knapweed currently occupies large areas of the site, unlike another Priority 1 species, Russian knapweed, which is confined to about one acre.

Priority 2 Species, by and large, infest the site to a limited extent. Because of the small, isolated nature of their infestations, it is still possible to eliminate Priority 2 Species altogether.

Priority 3 Species are those for which no control measures are currently planned. This group includes the majority of noxious weed species at Rocky Flats. Paradoxically, this low priority group includes a weed that has a large impact on native vegetation, Dalmation toadflax. Site managers admit this is a weed in need of control measures, but have chosen not to treat it because they say no effective treatment options currently exist. Dalmation toadflax has spread extensively up and down the Front Range. Have land managers elsewhere agreed to throw in

the towel?

Boulder County faces a similar problem with Dalmation toadflax on 1,200 acres of open space located directly north of Rocky Flats. *The Advisor* spoke with an official from Boulder County, who admitted broadcast spraying alone is powerless against this weed at the lower concentrations of herbicide necessary to protect native plants. Where Boulder County has enjoyed some success is with a three-pronged approach, including broadcast spraying in combination with hand pulling and spot spraying. On the Boulder County lands, this extra effort has paid off and is not as labor-intensive as it may seem, owing to the fact that the weed patches are fairly clustered, as opposed to being evenly spread throughout the infested area.

For an infestation the size of the diffuse knapweed problem at Rocky Flats, broadcast spraying of herbicide appears to be the best alternative. During 1999 and 2000, more than 2,500 acres were treated with mostly aerial application of herbicide. Such treatments were shown to be effective, especially when combined with spot control on the ground. This year, slightly over 1,000 acres will be sprayed aerially, and half as much, with vehicle or backpack-mounted equipment.

Prescribed burning is a tool useful for improving the overall vitality of grassland ecosystems. But fire jump-starts the growth of diffuse knapweed as well. In the presence of fire, knapweed seeds that were lying dormant in the ground are stimulated to germinate. Effectively, several years of germination are compressed into one event. As long as land managers are prepared, the aftermath of fire is not necessarily a heyday for weeds. Fires cause dormant seeds to sprout at once, reducing the number of herbicide applications. Moreover, through removal of plant litter, fire mechanically clears a path for herbicide to reach the budding weeds.

Prescribed fire was not implemented this spring, nor can it be until the moratorium on its use at Department of Energy facilities is lifted. Even so, site managers believe prescribed fire will ultimately become crucial to restoring the health of the prairie.



Board Issues Recommendations on Soil Cleanup

For some time now, the Department of Energy, along with the Environmental Protection Agency and the State of Colorado, have been seeking community involvement in the development of an overall decision framework for remediation of surface soil. This summer the Rocky Flats Citizens Advisory Board (RFCAB) provided input to the agencies in the form of two recommendations on soil cleanup.

A key component of the framework the agencies have proposed is the ALARA ("as low as reasonably achievable") principle. This is a provision of the Colorado Decommissioning Rule, which has been deemed applicable to the cleanup of Rocky Flats. In draft documents related to the current Annual Review of the Rocky Flats Cleanup Agreement (RFCA), the agencies have stated that remediation on a per project basis will not automatically stop as soon as the regulatory target has been achieved. Rather, cleanup must continue to the point where it is no longer considered technically or economically feasible.

In the context of occupational safety, minimizing worker exposure to radiation has long been standard ALARA practice, but exactly how the concept of ALARA will be applied to environmental cleanup projects at Rocky Flats remains an open question. Will cost be the only consideration, or will other factors be considered as well, such as risk reduction and community acceptance? In Recommendation 2001-1, RFCAB requested that the agencies develop a detailed ALARA proposal and allow the community to have input on it, prior to completion of the radionuclide soil action level review (scheduled for later this fall).

The Board also commented on a Working Draft of the Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation (ER RSOP). The ER RSOP attempts to provide a streamlined and consistent approach to decision-making at routine remediation projects. While supportive of the basic premise of the RSOP, the Board raised the following concerns:

- The Rocky Flats Stewardship Working Group has recommended that a robust stewardship analysis be conducted at the planning stage of all remediation projects; yet, the RSOP does not include consideration of long-term stewardship in the decision framework. On a project-by-project basis, cleanup managers need to be asking the following question: Is the burden of leaving contamination behind greater than the cost of cleaning it up?
- The Board recommends that the RSOP be augmented to explain the mechanism by which the ALARA principle could be used to effect cleanup beyond the regulatory minimum.
- The RSOP appears to allow soil already subject to a removal action to be replaced into the environment, even if it is contaminated to a level approaching the soil action level for some contaminants, such as heavy metals and PCBs.
- Implementation of the RSOP should be delayed until a final determination has been made on the radionuclide soil action level review and the ALARA process is more clearly defined.
- The RSOP should do a better job of explaining regulatory oversight of both routine remedial decisions and their implementation.
- Public involvement seems to be given little consideration in the RSOP. RFCAB requests that the public be provided with user-friendly summaries of the required RFCA documentation. RFCAB also requests regular updates from the ER staff on the status of routine remediation projects.

For the complete text of these recommendations and others, go to www.rfcab.org, click on the "RFCAB Documents" icon, then select "Board Recommendations."

The U.S. Department of Energy's Response to the EMSSAB Recommendations on Long-Term Stewardship

On June 15, 2001, the U.S. Department of Energy (DOE) responded to the Environmental Management Site-Specific Advisory Board's (EMSSAB) Recommendations on Long-Term Stewardship, dated April 19, 2001. Members of the EMSSAB, which includes the Rocky Flats Citizens Advisory Board, drafted the recommendations at the EMSSAB Workshop on Long-Term Stewardship, held in Denver, Colorado last October. The ten community advisory boards approved the recommendations by consensus voting. A summary of the DOE response letter is presented below.

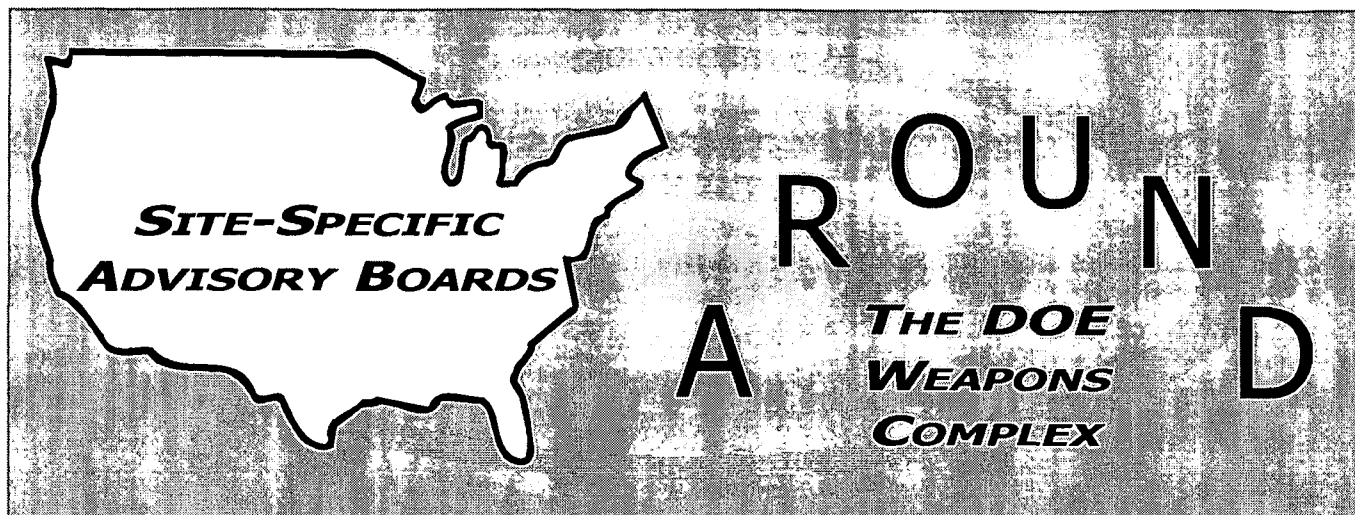
Funding: The EMSSAB recommendations requested DOE guarantee funding for long-term stewardship activities and to look for alternatives to the Congressional appropriation process. The DOE response letter stated that the department is currently researching legislative options for funding, including trust funds. DOE sites have been directed to establish operating baselines so that the budgeting

and planning process can move forward. Once the operating costs are identified, DOE intends to implement an effective funding mechanism. The DOE response letter did not state whether the proposed funding mechanism would be enforceable (regulation, policy, or guidance), nor did the letter provide a timeline. **Roles and Responsibilities for and Timing of Long-Term Stewardship:** The EMSSAB recommendations requested that DOE expedite the issuance of policies, orders, guidance, and training to institutionalize the long-term stewardship program. The DOE response letter stated that the Office of Long-Term Stewardship and the Idaho Field Office will develop a nationwide strategic plan for long-term stewardship. In addition to the strategic plan, DOE sites have been directed to develop site-specific long-term stewardship plans by 2004. **Information Management:** The EMSSAB recommendations requested that DOE identify the information management needs

and develop a mechanism to manage, disseminate, and preserve records. DOE has experience managing long-term stewardship records through the long-term surveillance and monitoring program run by the Grand Junction Office in Colorado, which deals mainly with uranium mine tailing sites. DOE intends to use this experience, combined with expert knowledge from other groups such as the National Archives, to develop a path forward on this issue. **Public Involvement:** The EMSSAB recommendations asked the department to provide education and community activities to encourage early involvement in the stewardship process. The DOE response letter states that there are several federal organizations that have formed stewardship subcommittees to meet this purpose. In addition, DOE supports the efforts of local governments and the advisory boards to ensure active involvement in the stewardship process.

Roadblock to Rocky Flats Closure (continued from page 1)

has placed a moratorium on further development of the immobilization process until the National Security Council can review it. This development and the lack of a clear strategy and commitment to ship the materials from his state has led South Carolina Governor Jim Hodges to express concern that Rocky Flats materials could remain in South Carolina indefinitely. Unless the Department of Energy presents the governor with a clear strategy for removing the materials from the Savannah River Site, he could exert political pressure to stop or delay RFFTS shipments to the site. The impact of any delay could be quite dramatic for Rocky Flats. The current plan calls for the bulk of the plutonium material to be gone by 2003, thus freeing up dollars currently spent on safeguards and security to go toward cleanup. Any delays will mean that those freed up resources will not be available and the cleanup schedule will suffer unless Congress provides additional funding.



This Issue: Nevada Test Site Citizens Advisory Board

The Rocky Flats Citizens Advisory Board is one of ten Site-Specific Advisory Boards (SSABs) that have been formed at former nuclear weapons production sites. In each issue of The Advisor, we spotlight the activities of one of these boards.

The Nevada Test Site encompasses 1,350 square miles of remote desert land in southern Nevada, approximately 65 miles northwest of Las Vegas. An additional 5,470 square miles of unpopulated land surrounds the Nevada Test Site, consisting of a protected wildlife range and a military gunnery range. During the Cold War, this remote location provided an ideal testing ground of nuclear weapons.

In late 1950, President Harry S. Truman established the Nevada Test Site as a continental test site for nuclear weapons. Atmospheric testing began in 1951 and continued until 1962, shortly before the Limited Test Ban Treaty of 1963 was signed. In all, 100 atmospheric nuclear tests were conducted during that time. After 1963, an additional 828 underground tests were also performed to study weapons effects and the peaceful use of atomic energy. The last underground test was detonated on September 23, 1992. Since the nuclear weapons testing moratorium in 1992, the test site has been diversified into other programs, including hazardous chemical spill testing, emergency response training, conventional weapons testing, and waste management and environmental technologies studies. The Nevada Test Site is important to Rocky Flats as the final disposal site of low-level radioactive waste.

While the Nevada Test Site continues to operate as part of the Department of Energy's Nevada Operations Office, environmental cleanup is also being conducted. The Community Advisory Board (CAB) for the Nevada Operations Office oversees cleanup and waste management activities on behalf

of the local communities. CAB provides consensus-based recommendations to the Department of Energy on major technical and policy issues. Some of the major issues include waste storage, disposal, and transportation practices, contaminated groundwater from underground testing, contaminated soil, future land use, and stockpile stewardship.

CAB also participates in environmental issues pertaining to the controversial Yucca Mountain Repository. Yucca Mountain is a proposed geologic repository designed to store and dispose of spent nuclear fuel from commercial nuclear power plants and high-level radiological waste from defense programs. Earlier this year, Secretary of Energy Spencer Abraham voiced support of the nuclear waste repository to support President Bush's energy proposals. The earliest the repository could open is 2010. Current issues include the Environmental Protection Agency's establishment of final public health and environmental protection standards (15 millirem of radiation dose per year) and the Draft Environmental Impact Statement (EIS), which describes the potential environmental impacts that could occur based on the alternative design options. In May 2001, a supplement to the Draft EIS was released, modifying some of the designs. If the Department of Energy can prove that the health and environmental protection standards can be met, the next steps for Yucca Mountain will be for the President to recommend and for Congress to ratify the site as a nuclear waste repository, and for the Nuclear Regulatory Commission to issue a license for the site to receive radioactive waste.

Rocky Flats Site Tour Held for Board Members

On May 17, the site conducted a tour for Citizens Advisory Board members and other interested members of the public. The tour was originally planned for May 3, but postponed due to a spring snowstorm that hit the area on that day.

The first stop on the tour was a bluff overlooking Lindsay Ranch, where Robin Romero of the U.S. Fish and Wildlife Service talked about the unique ecologi-

cal and cultural resources found within the Rock Creek Reserve. From there, the group proceeded on a driving tour that included the 903 Pad, the trenches, the B-Series Ponds, and the Solar Pond Passive Treatment System. Finally, tour participants were escorted into Building 664 for a presentation on the TRUPact loading facility.



While on tour at Rocky Flats, Board member Nancy Peters watches as drums are loaded into a TRUPact container.

RFCAB MISSION STATEMENT

The Rocky Flats Citizens Advisory Board, a nonpartisan, broadly representative, independent advisory board with concerns related to Rocky Flats activities, is dedicated to providing informed recommendations and advice to the agencies (Department of Energy, Colorado Department of Public Health and Environment, and the Environmental Protection Agency), government entities, and other interested parties on policy and technical issues and decisions related to cleanup, waste management, and associated activities. The Board is dedicated to public involvement, awareness and education on Rocky Flats issues.



RFCAB Website:
www.rfcab.org

The Advisor is published quarterly by the Rocky Flats Citizens Advisory Board (RFCAB). The Executive Editor is Jerry DePoorter. Except as noted, all articles are written by RFCAB staff: Jerry Henderson, Ken Korkia, Noelle Stenger, and Deb Thompson. Material may be reprinted if credit is given. RFCAB is funded under a 2001 grant of approximately \$350,000 sponsored by the U.S. Department of Energy. To request a change of address, to add or remove your name from the mailing list, or if you have questions, suggestions, ideas, contact:

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Rocky Flats Public Meeting Calendar

October

1	Rocky Flats Coalition of Local Governments	8 to 11 a.m.	Jeffco Airport
3	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall
4	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
17	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall
25	Stewardship Working Group	3:30 to 5:30 p.m.	Arvada City Hall
31	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall

November

1	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
5	Rocky Flats Coalition of Local Governments	8 to 11 a.m.	Jeffco Airport
14	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall
28	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall
29	Stewardship Working Group	3:30 to 5:30 p.m.	Arvada City Hall

December

3	Rocky Flats Coalition of Local Governments	8 to 11 a.m.	Jeffco Airport
6	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Location TBD
12	RFCA Stakeholder Focus Group	3:30 to 6:30 p.m.	Broomfield City Hall

ALL MEETINGS ARE SUBJECT TO CHANGE, PLEASE CALL BEFORE YOU GO: (303) 420-7855

Arvada City Hall, 8101 Ralston Road, Arvada

Broomfield City Hall, One Descombes Drive, Broomfield

Jefferson County Airport Terminal Building, Mount Evans Room, 11755 Airport Way, Broomfield

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Broomfield, CO 80021
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The Advisor is printed with
soy-based inks on 60% recycled
paper (30% post-consumer)